EARLY ACTION COMPACT
FOR THE
State of Tennessee and Nashville MSA

Prepared for

U. S. Environmental Protection Agency
Region 4
Atlanta, Georgia

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1.0 PURPOSE OF THE EARLY ACTION COMPACT

This Early Action Compact (EAC) serves as a Memorandum of Agreement among government agencies representing, collectively, local governments, state governments, including the Tennessee Air Pollution Control Board (TAPCB), and the United States Environmental Protection Agency (EPA). It is for the express purpose of commitment to EPA's "Protocol for Early Action Compacts Designed to Achieve and Maintain the 8-Hour Ozone Standard".

The "Protocol" allows for early voluntary 8-hour air quality improvement plans to be developed through a "Compact" between Local, State, and EPA officials for areas that are in attainment for the 1-hour ozone standard, but approach or monitor exceedances of the 8-hour standard. All areas in Tennessee are currently designated in attainment of the 1-hour ozone standard and, based on preliminary data for 2000 through 2002 a number of areas may not be in attainment of the 8-hour ozone standard. Thus, the areas are eligible and a good candidate for the Early Action Compacts.

The EAC requires the development of an early action plan that includes all necessary elements of a comprehensive air quality plan, but is tailored to local needs and driven by local decisions. As long as all Compact terms and milestones are met, the effective date of nonattainment designations is deferred, as are related requirements. The early action approach will offer a more expeditious timeline for achieving emissions reductions than EPA's expected 8-hour implementation rulemaking, while providing "fail-safe" provisions for the area to revert to the traditional State Implementation Plan (SIP) process if specific milestones are not met. Currently, EPA plans to make the designations for the 8-hour ozone standard in 2004.

According to the latest EPA guidance, this Compact is to be executed no later than December 31, 2002. The air quality improvement plan required of the Compact is to be completed and its elements submitted to the EPA no later than December 31, 2004 to be incorporated into the Tennessee State Implementation Plan.

2.0 BACKGROUND

2.1 Air Quality Status/Trends in Tennessee

The entire State of Tennessee is currently in attainment for all pollutants with established National Ambient Air Quality Standards. Portions of the State however, are not expected to be in attainment with the 8-hour ozone standard by the end of 2002.

Table 1 provides a summary of the Nashville MSA, 4^{th} highest 8-hour average readings for 2000, 2001, and 2002 and the design value for the three year period. A design value of 85 ppb or greater represents a nonattainment situation, thus the Nashville MSA area is potentially classified with a nonattainment designation.

TABLE 1

Summary Data for 8-Hour Ozone at the Monitoring Sites Within the Nashville MSA for 2000-2002

County	Site Name	MONITOR ID	2000 4th Max.	2001 4th Max.	2002 4th Max.	Design Value PPM
Davidson Co	1015 Trinity Lane	470370011 - 1	0.072	0.07	0.073	0.071
Davidson Co	Percy Priest	470370026 - 1	0.084	0.079	0.079	0.080
Rutherford Co	Eagleville Puckett's Farm	471490101 - 1	0.086	0.076	0.090	0.084
Sumner Co	Rockland Recreation Area-Old Hickory Dam	471650007 - 1	0.093	0.086	0.086	0.088
Sumner Co	Cottontown Wright's Farm	471650101 - 1	0.089	0.086	0.087	0.087
Williamson Co	Fairview Middle School Crow Cut Road	471870106 - 1	0.088	0.08	0.094	0.087
Wilson Co	Cedars Of Lebanon State Park	471890103 - 1	0.088	0.079	0.088	0.085

Data Source Table 1. Final 2002 Data. There are no other ambient air ozone monitors in the MSA.

2.2 History of Local Air Quality Planning Efforts

Inspection and Maintenance Programs:

Davidson County began a basic vehicle emissions testing program in June of 1985, testing cars 12 years old and newer. In December 1994, Davidson County expanded their basic testing program with a three point tampering check, and included all gasoline powered cars and trucks weighing under 8,500 GVWR for vehicles 1975 and newer. Beginning July 2002 Davidson County began testing cars 1996 and newer using On Board Diagnostics (OBD II) with a gas cap leak check, while continuing to test cars ages 1975-1995 with the basic test.

Rutherford, Sumner, Williamson, and Wilson Counties began basic emissions testing in December 1994. Vehicles tested include model years 1975 and newer with a GVWR of 8,500 pounds or less. For those vehicles that are 1996 and newer, OBD II testing began in July of 2002, which includes a gas cap leak check.

Stage I and II Vapor Recovery:

Stage I requirements have been in place since the late 1970s for Davidson County. In the early 1990s applicability was extended to Rutherford, Sumner, Williamson and Wilson Counties.

Stage II regulations went into effect in 1993 for Davidson, Rutherford, Sumner, Williamson and Wilson counties requiring control installation over approximately the following three years.

Reclassification status of the Nashville MSA for the old 1-hour ozone non-attainment areas.

As of December 2002, the previous nonattainment area maintenance plan is in place and has been fully implemented. This area also has an effective I/M program as described above.

NASHVILLE, TN
10/30/1996 61 FR Page 55903 Final Approval Redesignation to Attainment

Ozone forecasting and outreach programs.

Beginning in April 2001 and culminating in September 2002, a statewide effort was undertaken to develop and implement an effective ozone forecasting and public outreach program. The ozone forecasting project focused on the existing metropolitan areas of the state with the support of the local air pollution control agencies, EPA, TVA and the state Air Pollution Control Division.

Several areas of the state are developing or participating in public outreach programs to encourage voluntary measures that can be taken on Ozone Action Days to help minimize emissions of precursor chemicals that contribute to ozone formation and exceedances.

Ozone forecasts were prepared and issued for the Nashville area in Tennessee. Local air quality reports were also prepared and issued on a daily basis in the Nashville area of the state.

2.3 The Early Action Compact/Air Quality Improvement Plan

Areas formally declared in violation of the NAAQS are designated "nonattainment areas" and must meet certain Clean Air Act requirements such as:

A. New Source Review – requires a comprehensive review of new or expanded industrial operations to minimize air pollution. Emissions controls requirements are more stringent and costly than for attainment areas.
B. Transportation Conformity – requires a demonstration that regional long-range transportation plans will not negatively affect progress toward attainment or federal highway funds can be withheld.
C. Rate of Progress Requirements – a certain percentage of pollutants must be reduced each year.

D. Failure to Attain – consequences of failure to reach attainment by the specified date include stricter control measures and the potential for stiff penalties.
E. 10-year Maintenance Plan – includes additional or continuing mandatory programs for 10 years following attainment.

The area's participation in the Early Action Compact Protocol offers several key advantages relative to the traditional nonattainment SIP process. These include:

A. The EAC Protocol is designed to achieve clean air sooner than would be expected under the traditional nonattainment process.
B. The EAC Protocol affords the signatories greater flexibility in selecting emission reduction measures and programs that are best suited to local needs and circumstances.
C. The EAC Protocol ensures deferral of nonattainment designation and related requirements, thereby avoiding the stigma, cost, and economic development impacts associated with a nonattainment designation while the protocol remains in effect.

The cornerstone of the Early Action Compact Protocol is the Air Quality Improvement Plan (AQIP) developed to reduce local ozone-forming emissions and lower summertime ozone levels. It is the official attainment/maintenance plan for the area to be developed under the EAC Protocol agreement. It is a comprehensive air quality plan that will be incorporated into a formal Tennessee State Implementation Plan, and the area will be required to carry out this plan just as in nonattainment areas. Unlike a nonattainment area SIP plan, though, the AQIP will be tailored to local needs and driven by local decisions. The specific elements required of the AQIP are described below in Section 3.2. According to the EAC Protocol, it must be completed and submitted by no later than December 31, 2004, to the EPA to be incorporated into the State SIP. However, recent guidance from EPA requires that the local plan must be complete and submitted to the State and EPA by March 31, 2004 to provide adequate time for Tennessee to adopt the plan as a State rule prior to submittal to EPA as a SIP revision by December 31, 2004.

2.4 Regional Interstate Coordination

Tennessee has also participated in the Southern Appalachian Mountains Initiative and in VISTAS to coordinate air quality management in a multi-state fashion in East Tennessee. Tennessee is currently participating in ATMOS with the neighboring states in West Tennessee.

3.0 MEMORANDUM OF AGREEMENT

This Early Action Compact (EAC) is a Memorandum of Agreement between EPA and the local governments in the Nashville MSA (Cheatham, Davidson, Dickson, Robertson, Rutherford, Sumner, Williamson, and Wilson) including the Nashville Local Air Pollution Control Program, County Executives and the state government represented by

the TAPCB.. It is for the express purpose of developing and implementing an Air Quality Improvement Plan (AQIP) that will reduce ozone levels and achieve and maintain compliance with the 8-hour ozone standard in the Nashville MSA.

3.1 General Provisions

A. The signatory parties commit to develop, implement and maintain the AQIP according to Protocol for Early Action Compacts endorsed by EPA on June 19, 2002 (as supplemented in a letter dated October 18, 2002, from Gregg Cooke, EPA, to Robert Huston, Texas Commission on Environmental Quality), and adhere to all terms and conditions stated in the Protocol. On November 14, 2002, EPA finalized its Early Action Compact guidance memorandum for state and local governments that spelled out specific milestones and tasks for a state or local government to qualify for an early action compact.

B. If the area fails to meet all the terms of the EAC, including meeting agreed-upon milestones, then it will forfeit its participation and will be subject to designation as nonattainment according to EPA's 8-hour ozone implementation rules.

C. Before formal adoption into the Tennessee SIP, this agreement may be modified or terminated by mutual consent of all signatory parties, or any party may withdraw from the agreement. The local government signatories will approve the AQIP before it is submitted to the TAPCB for inclusion in the SIP. Once the AQIP elements are incorporated into the SIP, any modifications will be treated as SIP revisions.

D. The signature date of the EAC is the start date of the agreement’s term and the agreement remains in effect until December 31, 2007, except as specified above.

3.2 Air Quality Improvement Plan

The state and local governments agree to develop and implement an AQIP that will demonstrate attainment of the 8-hour ozone standard by December 31, 2007, and maintenance until at least 2012. The state and local governments will develop this plan in coordination with EPA, stakeholders, and the general public. The AQIP will include a process monitor and maintain long-term compliance with the standard. The AQIP will be finalized and submitted to EPA by March 31, 2004 for submittal by December 31, 2004, for SIP amendment. If a development or issue arises that may impact performance or progress toward milestones, the state or local government signatories will immediately notify all other signatories.

The AQIP will address the following major elements.

3.2.1 Milestones and Reporting

To facilitate performance monitoring and communication with the EPA, TAPCB, and stakeholders, the EAC protocol requires that the EAC include clearly measurable milestones for the development and implementation of the AQIP. Major milestones established for this EAC are shown below in Table 2. The individual participants representing their respective area will assess and report all progress relative to these milestones to the state which in turn will report all progress relative to these milestones in a regular, public process at least every six months.

Table 2. Major Milestones for the Tennessee State and Local Early Action Compact.

MILESTONE	DATE
EAC Memorandum of Agreement Executed	**31DEC02**
Identify & Describe Likely Local Control Measures Being Considered	**16JUN03**
Initial Progress Report Prepared and Updated Every 6 Months	**23JUN03**
Emissions Inventories Completed	**30JUN03**
Base Case/Future Case Modeling Completed	**30SEP03**
Control Scenarios Modeling Completed	**30NOV03**
Adoption of Emission Reduction Measures	**30JAN04**
Completion/Adoption of Air Quality Improvement Plan and Submittal to the EPA for Review	**31MAR04**
Submittal of SIP	**31DEC04**
All Local Emission Reduction Strategies Implemented	**31MAR05**
Review Progress in Implementation of Reduction Strategies	**30JUN06**
EAC Expires	**31DEC07**
Annual Reviews of Growth	**2008-2012**

3.2.2 Emission Inventories

Base case(s) and related future year (2007) emissions inventories will be developed by June 30, 2003. These inventories will be used for input for SIP-quality regional airshed modeling, thus they must be developed using tools that are suitable for this purpose and approved by both TDEC and EPA. The base case(s) inventories will be developed for 1999 or later episodes selected to be representative of typical ozone exceedance situations as determined with EPA episode selection guidance. The inventories will include:

A. Point source emissions – employing TDEC Emission Inventory System data.
B. Onroad mobile source emissions – employing Mobile 6 emission modeling based on appropriate transportation data for Nashville MSA.
C. Nonroad sources - model data adjusted for local equipment usage.
D. Area sources - data based, where possible, on local survey data.
E. Biogenic sources – inventory developed employing methods acceptable to TDEC and EPA.

Where practicable, trends in emissions from the various source categories will be analyzed to provide a better understanding of emissions trends statewide and to facilitate verification of accuracy of the inventories.

3.2.3 Modeling

All modeling will be based on the "Draft Guidance on the Use of Models and Other Analyses in Attainment Demonstrations for the 8-hour Ozone NAAQS" (EPA-454/R-99-004, May 1999). The modeling will follow the guidance as facilitated by the EPA Regional Office. Regional airshed modeling for the Air Quality Improvement Plan will employ an EPA-accepted modeling technique and appropriate EPA guidance for SIP-level modeling. Modeling protocol development, episode selection, model input preparation, and actual model simulations will involve close collaboration and agreement of the participating representatives, TAPCB, and EPA. There may also be opportunity to coordinate with representatives of other planning areas for efficiency and consistency in regional modeling efforts.

Base case and future case (2007) modeling are scheduled to be completed by September 30, 2003. Control strategy modeling including direction (e.g. effectiveness of VOC vs. NOx controls) and range finding (percent reduction scenarios – i.e. needed reduction levels) as well as control strategies scenarios are scheduled to be completed by November 30, 2003.

All adopted Federal and State emission reduction measures that have been or will be implemented by March 31, 2005, will be included in base case, future case, and control strategy modeling.

Modeling efforts will be carefully documented. Model performance will be assessed to assure conformance with EPA's accepted model accuracy criteria. A technical support

document describing the modeling effort and attainment demonstration will be part of the AQIP submittal.

3.2.4 Emission Reduction Strategies

Following research of various emission reduction strategies and, with guidance provided by testing of various strategies with the developed regional airshed modeling, the participating stakeholders will select and adopt local emission reduction measures necessary to support demonstration of attainment of the 8-hour ozone standard by December 31, 2007. The research, selection, and adoption process for the local measures is scheduled to be completed by March 30, 2004. However, recent EPA guidance requires that likely local measures being considered for the AQIP should be identified and described by June 16, 2003.

The selected local emission reduction measures will be specific, quantifiable and enforceable. Specific implementation dates, as well as detailed documentation and reporting processes will be provided for each.

The local emission reduction measures will be incorporated by the TAPCB into the SIP and submitted to EPA for review and approval. In the event the area desires to add, delete or substitute measures after SIP promulgation, the area will request a modification of the AQIP. Such modification will be treated as a SIP revision and facilitated by the Tennessee Department of Environment and Conservation (TDEC).

3.2.5 Maintenance for Growth

The AQIP will include a component to address emissions growth at least 5 years beyond December 31, 2007, ensuring that the previous nonattainment or attaining participating areas will remain in attainment of the 8-hour standard during that period. The future attainment maintenance analysis may employ one or more of the following or any other appropriate techniques necessary to make such a demonstration:

A. Modeling analysis showing ozone levels below the 8-hour standard in 2012;
B. An annual review of growth (especially stationary and mobile sources) to ensure control measures and growth assumptions are adequate;
C. Identification and quantification of federal, state, and/or local measures indicating sufficient reductions to offset growth estimates.

The AQIP will also detail a continuing planning process that includes modeling updates and modeling assumption verification (particularly growth assumptions) where changes in emissions inventories and growth assumptions warrant. The continuing planning process will consider and evaluate:

A. All relevant actual new point sources and major modifications of existing sources;

B. Impacts from increased emissions from potential new source growth;
C. Future transportation patterns and their impact on air quality in a manner that is consistent with the most current adopted Nashville Area Long Term Transportation Plan and most current estimate of future local motor vehicle emissions as adopted in the Nashville Area MPO's conformity documents approved by the U. S. Department of Transportation and EPA.

If the review of growth demonstrates that adopted emission reduction measures are inadequate to address growth in emissions, additional measures will be added to the AQIP through the SIP revision process.

3.2.6 Public Involvement

Public involvement will be conducted in all stages of the planning and implementation process. Public education programs will be used to raise awareness regarding issues, opportunities for involvement in the planning process, implementation of control strategies, and any other issues important to the participants. Interested stakeholders will be involved in the planning process as early as possible. They will be provided advance notice of meeting times, locations, and agenda for planning meetings. Plan drafts will be publicly available, and the document development process will have sufficient opportunities for comment from all interested stakeholders. Stakeholders will include, at a minimum, local environmental groups, Chambers of Commerce and other business groups, and the transportation community. Public comment on the proposed final AQIP will follow the normal SIP revision process as implemented by TAPCB. Semi-annual reports detailing, at a minimum, progress toward milestones will be publicly presented and available.

3.3 Local, State, and EPA Commitments

3.3.1 State and Local Commitments

The State, including TDEC, and Local Governments will jointly hold responsibility for the development and implementation of the early action plan (Air Quality Improvement Plan), as well as for maintaining communication with all parties to the Compact. The Nashville Local Air Pollution Control Program will be the lead agency in Davidson County and TDEC will be the lead agency for the remaining Nashville MSA counties. Other responsibilities include:

A. Drawing up the Compact, which embodies the requirements described in the EAC Protocol, including a time line for milestones;
B. Completing and signing by all parties of the Early Action Compact no later than December 31, 2002;
C. Completing and adopting the emission reduction measures elements of the AQIP as part of the SIP no later than March 31, 2004.
D. Notifying parties as soon as possible if Compact milestones will be missed or have been missed;

E. Notifying parties as soon as possible if Compact modification/termination is to be requested.

3.3.2 State Commitments

The State, represented by TDEC and TDOT, will provide support to all participants throughout the planning and implementation process. Areas of support will include:

A. Technical assistance in the development of emission inventories, modeling process, trend analysis, and quantification and comparison of emission reduction strategies;
B. Necessary information on all Federal and State adopted emission reduction measures which affect the area;
C. Critical third party review of emissions inventory, modeling, and self-evaluation work;
D. Technical and strategic assistance, as appropriate, in the selection and implementation of emission reduction strategies;
E. Technical and planning assistance in developing and implementing processes to address the impact of emissions growth beyond the attainment date;
F. Maintenance of monitors and reporting and analysis of monitoring data;
G. Support for public education efforts;
H. Coordinate communication between stakeholders and EPA to facilitate continuing EPA review of local work;
I. Propose a modification of the SIP to adopt the appropriate elements of the AQIP;
J. Adoption of emission reduction strategies into the SIP as expeditiously as possible. The final complete SIP revision must be completed, adopted, and submitted by the state to EPA by December 31, 2004.

3.3.3 Tennessee Air Pollution Control Board Commitments

The Tennessee Air Pollution control Board, in consultation with TDEC, the local governments, interested stakeholders and members of the public will help to ensure that actions under the Early Action Compact are tailored to the needs of the Nashville MSA and that adequate progress is attained under the AQIP. In consultation with the aforementioned, the Tennessee Air Pollution Control Board will:

A. By February 1, 2003 develop a plan for routine state-level consultation with members of the environmental, public health and business

communities as well as opportunities for timely public input and comment.

B. By March 1, 2003, develop measurable goals and milestones, building on those listed in Table 2: identify the consequences of failure to achieve goals and milestones and provide samples of acceptable control measures for the AQIP.

C. Every 6 months conduct a formal review of progress attained under the EAC, including determining whether the terms of the EAC, in general and with respect to each local area, should be modified or revoked.

3.3.4 EPA Commitments

The EPA will recognize the State and Local commitment to voluntarily adopt an early, substantive, scientifically-based and enforceable attainment plan with early implementation of control measures by becoming a party to the Early Action Compact developed in conformance with the EPA's EAC Protocol. EPA responsibilities include:

A. Provided that the monitors in the Nashville MSA reflect attainment by December 31, 2007, EPA will move expeditiously to designate those areas as attainment and impose no additional requirements other than those federally approved SIP revisions undertaken pursuant to this Early Action Compact. The Office of Management and Budget (OMB) has announced changes for Core Based Statistical Areas (65 FR 82228,12/27/2000 FR) and plans to publish new lists of areas in June 2003. EPA will be evaluating OMB's new lists after they are released to determine whether they concur and/or can still use OMBs' new definition for purposes of the starting point for nonattainment area boundaries. At that time EPA will also look at the nonattainment boundary guidance memo of 3/28/2000 to see if it might need updating based on the OMB work.

B. If monitors in the Nashville MSA reflect nonattainment when EPA's 8-hour implementation guidelines call for designations or at any time during the area's participation in the Early Action Compact, EPA will defer the effective date of nonattainment designation and related requirements for the area as long as all terms and milestones of the compact are being met, including submission of the early action SIP revision by 2004.

C. The EPA will provide technical assistance to all Nashville MSA participants in the development of the AQIP.

D. The EPA will move quickly to review and approve completed plans by no later than nine months after submission of the SIP revision by TDEC.

E. Provided that the area has progressed from nonattainment to attainment status by December 31, 2007, EPA will move expeditiously to designate the area as attainment and impose no additional requirements.

F. If at any time the area does not meet all the terms of this compact, including meeting agreed-upon milestones, then it will forfeit its participation and be designated (or re-designated if necessary) according to EPA's 8-hour ozone implementation guidelines. The EPA will offer such an area no delays, exemptions or other favorable treatment because of its previous participation in this program.

G. If any of the areas monitors identified in Table 1 violates the standard after December 31, 2007, the area will be designated nonattainment. TDEC will then submit a revised attainment demonstration SIP revision according to the Clean Air Act (CAA) and EPA's 8-hour implementation rule, unless the 8-hour implementation schedule requires SIPs from 8-hour nonattainment areas before December 31, 2008. In that event, a revised attainment demonstration SIP revision for the participating area will be due as soon as possible but no later than December 31, 2008. In no event will EPA extend the attainment date for the area beyond that required by the CAA and/or EPA's 8-hour implementation rule.

H. The region will not be allowed to renew this EAC after December 31, 2007, or to initiate a new compact if it has previously forfeited its participation.

3.4 Termination Provision:

This Early Action Compact is offered to EPA in good faith as a way to achieve clean air quicker with the opportunity to tailor a control plan in the most beneficial way possible for the Nashville MSA. It is expressly declared that prior to adoption of early control measures into the Tennessee SIP, a signatory to this Early Action Compact may opt out of the process by filing a written notice to the other signatories. In filing said written termination notice, the terminating entity will revert to the routine attainment designation process provided in the Clean Air Act and its implementing regulations in effect at the time of the signing of this document. If any of the counties of Davidson, Rutherford, Sumner, Williamson, or Wilson opt out of this process, the Nashville MSA Compact shall be terminated since these counties are a part of a single transportation conformity modeling process through the Nashville Area MPO. It is also recognized that if EPA deems the terminating entity’s emissions are critical to the success of an Early Action Compact, EPA may nullify the Early Action Compact for the entire MSA.

In evaluating certain public participation documents that were filed as part of the process that created this document, it is apparent that not all entities agree with the concept of an Early Action Compact. If litigation should ensue that results in the inability of any entity

to live up to the commitments made including actual SIP revisions, then the signatories shall have the option of withdrawing all or part of any SIP revision given to EPA as part of the Early Action Compact and EPA shall honor that withdrawal.

3.5 Signatures

The signatory below, as authorized by the Tennessee Air Pollution Control Board Resolution approved December 11, 2002, has agreed to this Early Action Compact, which becomes effective on December 27, 2002. All other signatories shall be attached as appropriate.

_____ _____

Mr. Richard A. Bolton, Vice-Chairman Date
Tennessee Air Pollution Control Board

4.0 Table of Acronyms as Used in this Document

MSA	Metropolitan Statistical Area
EAC	Early Action Compact
EPA	Environmental Protection Agency
TAPCB	Tennessee Air Pollution Control Board
SIP	State Implementation Plan
ppb	parts per billion
GVWR	Gross Vehicle Weight Rating
OBD II	On Board Diagnostics
I/M	Inspection and Maintenance
TVA	Tennessee Valley Authority
NAAQS	National Ambient Air Quality Standards
AQIP	Air Quality Improvement Plan
SAMI	Southern Appalachian Mountain Initiative
VISTAS	Visibility Improvement State and Tribal Association of the Southeast
VOC	Volatile Organic Compound
NO_X	Nitrogen Oxide
TDEC	Tennessee Department of Environment and Conservation
MPO	Metropolitan Planning Office
TDOT	Tennessee Department of Transportation
CAA	Clean Air Act